



WYOMING LEGISLATIVE SERVICE OFFICE

Memorandum

DATE April 17, 2023

TO Joint Minerals, Business, and Economic Development Interim Committee

FROM Brian Fuller, Senior Staff Attorney

SUBJECT Topic Summary: Carbon Sequestration and Unitization Statutes

This summary provides background information on statutory provisions related to permit requirements for the geologic sequestration of carbon dioxide and for the unitization of carbon sequestration sites. The discussion of Wyoming's sequestration statutes in this summary includes the amendments to those statutes made in 2022 House Bill 47, which will take effect on July 1, 2023.

Approved Interim Topic

Priority #2: Carbon Dioxide and Carbon Capture, Utilization, and Sequestration.

The Committee will study issues concerning carbon dioxide and carbon capture, utilization, and sequestration technology, including unitization issues, fees and revenue from the sequestration of carbon dioxide, and carbon capture technology use at electric-generation facilities.

Sequestration, Generally

Under the federal Safe Drinking Water Act, the Environmental Protection Agency is required to implement an Underground Injection Control (UIC) Program and enforce the requirements of that program.¹ Under federal law, states may apply for and receive the primary responsibility for managing and enforcing a state UIC program.² The state of Wyoming (through the Department of Environmental Quality) has applied for and has

¹ 42 U.S.C. §§ 300h, 300h-1, & 300h-2.

² 42 U.S.C. § 300h-1.

received primary regulatory authority over all six types of wells that the EPA oversees through the UIC program.³ Included in this primary regulatory authority is the authority to regulate Class VI wells, which are wells used for injecting carbon dioxide (or a carbon dioxide stream) for geologic sequestration beneath the lowermost formation containing an underground source of drinking water.⁴

In Wyoming, the sequestration of carbon dioxide is prohibited unless first authorized by a permit that the Department of Environmental Quality (DEQ) has issued.⁵ If the sequestration or injection of carbon dioxide is for purposes of enhanced oil recovery or other minerals and is approved by the Wyoming Oil and Gas Conservation Commission,⁶ then a DEQ-issued permit is not required, and the injection or sequestration is not subject to Wyoming's sequestration laws.⁷ If the operator voluntarily applies and submits a plan for accounting for any incidentally stored carbon dioxide, the Commission may (after review) enter an order recognizing the incidental storage occurring during the enhanced oil recovery operation and certifying the quantity of carbon dioxide being stored.⁸ A certification by the operator regarding incidental storage is not subject to the DEQ sequestration or unitization requirements.⁹ The Commission is required to transfer regulation of a carbon-dioxide injection operation back to DEQ if an oil-and-gas operator converts to geologic sequestration upon ceasing oil-and-gas recovery operations or if there is a change in primary purpose to long-term storage (instead of oil recovery) and an increased risk to an underground source of drinking water as compared to enhanced oil recovery operations has occurred.¹⁰ The Commission also has jurisdiction over any subsequent extraction of sequestered carbon dioxide that is intended for commercial or industrial purposes.¹¹

³ Environmental Protection Agency, Primary Enforcement Authority for the Underground Injection Control Program, available [here](#) (last visited April 12, 2023). Wyoming is one of only two states (North Dakota) that has received primacy for all six well classes; other states have primacy over one or more (but not all) well classes. Id.

⁴ Wyo. Dep't of Environmental Quality, Water Quality Rules, Ch. 24, § 2(n).

⁵ W.S. 35-11-313(a).

⁶ Unless otherwise specified, references to the "Commission" are references to the Wyoming Oil and Gas Conservation Commission.

⁷ W.S. 35-11-313(b).

⁸ W.S. 30-5-502(a).

⁹ Id.

¹⁰ W.S. 35-11-313(c).

¹¹ W.S. 35-11-313(k).

The injector of the carbon dioxide is required to apply for any required permit.¹² Permit applications must include, among other things: (1) a description of the general geology of the affected area of injection; (2) a characterization of the injection zone and aquifers above and below the injection zone; (3) an assessment of the impact to fluid resources; (4) plans and procedures for environmental surveillance and excursion detection and prevention; (5) a site and facilities description; (6) a plan for periodic well testing; and (7) proof of bonding or financial assurance to ensure that the sequestration sites will comply with Wyoming law and DEQ regulations.¹³ If a carbon-dioxide excursion (any detection of migrating carbon dioxide at or beyond the boundary of the sequestration site) occurs, the operator must provide immediate verbal notice to DEQ, followed by written notice to all surface owners, mineral claimants, mineral owners, lessees, and other owners of records of subsurface interests located within one mile of the sequestration site within 30 days of discovering the excursion.¹⁴

In addition to permit application requirements, statute also requires the DEQ Water Quality Division Administrator to recommend rules for "requirements for fees to be paid by all permittees of geologic sequestration sites and facilities, which may include a per ton injection fee or a closure fee, during the period of injection of carbon dioxide" into subsurface formations in Wyoming.¹⁵ Under current statute, these fees must be deposited into the Geologic Sequestration Special Revenue Account.¹⁶ Statute also requires that an application fee to be paid when the application is filed based on the estimated costs of reviewing, evaluating, processing, serving notice, and holding any hearings.¹⁷ This application fee must be held in a separate account for use to complete the application review process; any unused fees after the review must be returned to the applicant.¹⁸

Once DEQ approves or issues a permit, the Department must issue a certificate that includes a statement of permit issuance, a description of the area covered by the permit, and any other information that DEQ deems appropriate.¹⁹

¹² W.S. 35-11-313(e).

¹³ W.S. 35-11-313(f)(ii).

¹⁴ W.S. 35-11-313(f)(iii); 35-11-313(f)(ii)(E) and (N).

¹⁵ W.S. 35-11-313(f)(vii).

¹⁶ Id.

¹⁷ W.S. 35-11-313(h).

¹⁸ Id.

¹⁹ W.S. 35-11-313(n).

Carbon Dioxide Sequestration-Unitization

Wyoming statute specifies a process by which carbon dioxide injectors may seek a unitization order for the pooling of pore-space interests for purposes of injecting and sequestering carbon dioxide. Generally, the purposes of unitization are to protect corresponding rights, comply with environmental requirements, and facilitate the use and production of Wyoming energy resources.²⁰ Any interested person can apply with the Commission for an order that provides for the operation and organization of a unit of one or more parts as a geologic sequestration site and for the pooling of interests in pore space in the proposed unit for purposes of conducting carbon dioxide injection and sequestration.²¹ Among other things, the application for unitization must include:

- A copy of any permit or draft permit that DEQ has issued allowing sequestration, or any application for a permit.
- A description of the pore space and surface lands proposed to be operated as the unit area.
- Information about the owners or persons with interests in the surface estate and pore space in the unit area and those who own or have interests in the surface estate or pore space adjoining the unit area.
- A statement about the type of operations contemplated for the unit area.
- A proposed plan of unitization, including provisions for determining the pore space to be used within the area, the appointment of a unit operator, and the timeline for when the plan will become effective.
- A proposed plan for determining the quantity of pore space storage capacity to be assigned to each separately owned tract within the unit, and the formula to be used to assign the economic benefits generated by use of pore space in the unit area.
- A proposed plan for generating economic benefits for the use of pore space within the unit area.
- A proposed operating plan providing for the manner in which the unit area will be supervised and managed, and how costs will be allocated and paid.²²

Once the Commission receives a unitization application, the Commission must promptly set the matter for a hearing and must require the applicant to give notice of the hearing by certified mail to all persons who must be included in the application (owners within and

²⁰ W.S. 35-11-314(a).

²¹ W.S. 35-11-315(a).

²² W.S. 35-11-315(a)(i)–(ix).

adjoining the unit area).²³ After the hearing, the Commission must enter an order with findings and approving the proposed unitization plan if the Commission finds that:

- The material allegations in the application are substantially true.
- The purposes of the unitization statutes will be served by granting the application.
- The application outlines operations that will comply with environmental requirements.
- Granting the application will facilitate the use and production of Wyoming energy resources.
- The quantity of pore space storage capacity, and the method used to allocate capacity to each separately owned tract within the unit area, represents each tract's actual share of the pore space to be used in sequestration.
- The method by which the allocation of economic benefits generated from use of pore space within the unit area is fair and reasonable (considering the costs required to capture, transport, or sequester the carbon dioxide).
- The method of generating economic benefits from the use of the pore space in the unit area is fair and equitable and is reasonably designed to maximize the value of the pore-space use.
- Other requirements that are in the Commission's rules are met.²⁴

Before a unitization order can become effective, the plan of unitization that the applicant submitted must be "signed or in writing ratified or approved by those persons who own at least eighty percent (80%) of the pore space storage capacity within the unit area."²⁵ If the applicant has not obtained the 80% consent threshold when the Commission enters its order, the Commission must, upon application, hold supplemental hearings and make findings to determine when and if the consent will be obtained.²⁶ Any interested person may apply to the Commission for an order applicable only to that unit area that requires the approval or ratification percentage be changed to 75%.²⁷ If the Commission finds that negotiations were being conducted since July 1, 2009, or for at least nine months before filing the application, that the applicant has been participating in the negotiations diligently and in good faith, and that the approval percentage cannot be obtained, the Commission may reduce the approval percentage from 80% to 75%.²⁸ If the applicant cannot obtain the required percentage within 6 months after the order of approval is

²³ W.S. 35-11-316(a).

²⁴ W.S. 35-11-316(b).

²⁵ W.S. 35-11-316(c).

²⁶ Id.

²⁷ Id.

²⁸ Id.

made, the unitization order shall be ineffective and revoked by the Commission, unless the Commission extends the time for good cause shown.²⁹

Once a unitization order takes effect, statute prohibits the operation of a unit area by anyone else except for the unit operator (or persons who act under the unit operator's authority).³⁰ Any amendment to a unitization order may be made in the same manner as an original order, except that no amendment shall change the assignments of pore space storage capacity between existing pore-space owners in the unit area, or the allocation of costs, without the written consent of owners constituting at least 80% of the pore space storage capacity in the unit area.³¹ Similar to the initial order, the applicant seeking the amendment has six months to obtain the required percentage of consent, and any person can apply to the Commission to have the approval percentage reduced from 80% to 75%.³²

The Commission can also, on its own accord or upon application, modify the unitization order regarding the operation, size, or other characteristic of the unit area in order to prevent or assist in preventing "a substantial inequity" resulting from operation of the unit.³³ This type of amendatory order cannot modify any sequestration permit previously issued.³⁴ An owner of pore space that has not been included in a unitization application or a unit area may petition the Commission for inclusion; an owner who is included in the unit is considered to have been a member of the unit since its inception and, after that owner pays or reimburses costs that unit members have paid, the owner is entitled to all economic benefits received by unit members since the inception of the unit.³⁵ Statute expressly provides that the unitization statutes shall not be construed as conferring the power of eminent domain on any person (and no unitization order can grant the right of eminent domain to any person).³⁶

Any Commission order or contract relating to a separately owned tract within the unit area cannot be terminated by the unitization order; that order or contract remains in force and applies to that tract.³⁷ No unitization order shall be construed to result in a transfer of

²⁹ Id.

³⁰ W.S. 35-11-316(d).

³¹ W.S. 35-11-316(e).

³² Id.

³³ W.S. 35-11-316(f).

³⁴ Id.

³⁵ W.S. 35-11-316(g).

³⁶ W.S. 35-11-316(j).

³⁷ W.S. 35-11-317(a).

all or any part of the title to pore space, and no order shall operate to violate the terms and requirements of any permit applicable to pore space within the unit area.³⁸

Sequestered Carbon Dioxide-Title and Liability

Beginning on July 1, 2023, Wyoming statute will specify who holds title and the responsibility for sequestered and injected carbon dioxide.³⁹ The person who applies for or holds a permit for sequestering carbon dioxide—the injector—has title to any carbon dioxide the injector injects and stores underground or within a unit area.⁴⁰ The injector holds title to the injected or stored carbon dioxide until DEQ issues a certificate of project completion.⁴¹ During the time that the injector holds title to injected carbon dioxide, the injector is liable for any damage that the injected carbon dioxide causes, including damage caused by carbon dioxide that escapes or is released from the pore space where it is stored underground.⁴²

After the injector completes all carbon dioxide injections under a sequestration permit, the injector can apply to the Department for a certificate of project completion.⁴³ The Department can only issue a certificate after notice, a hearing, and public comment, and if the injector satisfies the following conditions:

- At least 20 years have passed after the carbon dioxide injections ended.⁴⁴
- The injector establishes the following to DEQ's satisfaction:
 - The injector is fully compliant with all laws governing the injection and storage of the carbon dioxide.
 - The injector has addressed any pending claims regarding the injection and storage of the carbon dioxide.
 - The underground place or pore space where the carbon dioxide is stored is expected to no longer expand vertically or horizontally and poses no threat to human health, human safety, the environment, or underground sources of drinking water.

³⁸ W.S. 35-11-317(b).

³⁹ 2022 Wyo. Session Laws, Ch. 101.

⁴⁰ W.S. 35-11-318(a)–(b). References to statutes in this section of the summary are to the statutes as they will read on and after July 1, 2023.

⁴¹ W.S. 35-11-318(b).

⁴² W.S. 35-11-318(c).

⁴³ W.S. 35-11-319(a).

⁴⁴ W.S. 35-11-319(b).

- The stored carbon dioxide is unlikely to cross any underground or pore space boundary and is not expected to endanger any underground source of drinking water or human health, human safety, or the environment.
- All wells, equipment, and facilities used to maintain and manage the stored carbon dioxide are in good condition and will maintain mechanical integrity.
- The injector has plugged any injection wells and has completed all DEQ-required reclamation.⁴⁵

Once DEQ issues a certificate of project completion, the state assumes responsibility and liability for the stored carbon dioxide, and the title to the stored carbon dioxide must be transferred to the state (without payment of any compensation to the injector).⁴⁶ The title that is transferred to the state includes all rights, responsibilities, and interests in the stored carbon dioxide.⁴⁷ The liability for the stored carbon dioxide that the state assumes shall not result in the payment of any damages in excess of the balance of the Wyoming Geologic Sequestration Special Revenue Account.⁴⁸ The injector (and all persons who generated or injected the carbon dioxide) are forever released from all regulatory requirements associated with the continued storage and maintenance of the stored carbon dioxide, and any bond or financial assurance submitted to DEQ must be released.⁴⁹ The state, through DEQ, must assume responsibility for managing and monitoring the stored carbon dioxide until the federal government assumes responsibility for the long-term management and monitoring of that carbon dioxide.⁵⁰

Geologic Sequestration Special Revenue Account

The Legislature created the Wyoming Geologic Sequestration Special Revenue Account in 2010.⁵¹ The DEQ Director is required to administer the account, and funds in the account must be invested in a manner to achieve the highest possible return while preserving the corpus of the account.⁵² Funds in the account are continuously appropriated to DEQ for the uses specified below, and the account consists of all monies

⁴⁵ W.S. 35-11-319(c).

⁴⁶ W.S. 35-11-319(d)(i).

⁴⁷ W.S. 35-11-319(d)(ii).

⁴⁸ W.S. 35-11-319(d)(iii).

⁴⁹ W.S. 35-11-319(d)(iv)–(v).

⁵⁰ W.S. 35-11-319(d)(vi).

⁵¹ 2010 Wyo. Session Laws Ch. 52, § 1.

⁵² W.S. 35-11-320(a).

that DEQ collects to measure, monitor, and verify Wyoming geologic sequestration sites after a certificate of project completion is issued.⁵³

Funds in the Geologic Sequestration Special Revenue Account can be used only for:

- Testing, monitoring, and long-term inspections of geologic sequestration sites.
- Remediation of mechanical problems associated with remaining wells and infrastructure.
- Plugging and abandoning monitoring wells.
- All future claims associated with the release of carbon dioxide from a sequestration site after a certificate of project completion is issued, the release of all financial assurance instruments, and the termination of the permit.⁵⁴

Statute specifies the expenditure of funds from the account "shall not constitute a waiver by the state of Wyoming of its immunity from suit, nor does it constitute an assumption of any liability by the state for geologic sequestration sites."⁵⁵

As of April 1, 2023, there has been no activity in the account.

Conclusion

This summary provides a broad overview of Wyoming law concerning the sequestration of carbon dioxide and the unitization of carbon-dioxide sequestration in Wyoming. Please let me know if you have any questions.

⁵³ W.S. 35-11-320(a) and (b).

⁵⁴ W.S. 35-11-320(c).

⁵⁵ W.S. 35-11-320(d). Until July 1, 2023, Wyoming law also contemplates that there is not a waiver of sovereign immunity or an assumption of liability for the carbon dioxide injected in sequestration sites. See 2022 Wyo. Session Laws Ch. 101, § 3.